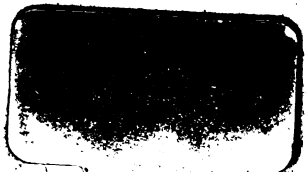

OBSERVATIONS

ON

SHEATHING VESSELS;

SEASONING TIMBER;

THE

PROPER TIME TO FALL TIMBER;

THE

NATURE AND WHAT FORCE IT IS THAT CAUSES THE SAP TO RISE;

WITH A NUMBER OF OTHER VALUABLE OBSERVATIONS.

PRINTED FOR THE AUTHOR,

By A. BLAUVELT.

....1805....

MR. BLAUVELT,

SIR,

The pamphlets you printed for me in 1800, *have long been disposed of—I have had applications for more of them; but it was not in my power to serve my friends—You will be pleased to reprint them, with such alterations as I have pointed out, as they wanted correcting and amendment. I have added a number of such matters as I judged would be useful to our country, which you will also be pleased to print in the same pamphlet.*

I am, Sir,
Your Humble Serv't,
HENRY GUEST.

July, 1805.

New-Brunswick, New-Jersey, February 10, 1800.

SIR,

YOUR very obliging letter of 25th November last, came duly to hand, it found me confined to my room by a violent cold, which is not yet quite worn off, or I should have answered it in due time with much pleasure.—You are pleased to note, that not being much in the habit of reading advertisements in news-papers, you had not heard of my advertisement, proposing the sheathing of vessels with leather, and wish to see it with my farther thoughts on that subject. This I willingly take my pen to perform as the thoughts may arise.—You are pleased also to observe, that in conversation with gentlemen of penetration, have heard it remarked, that it would be a poor substitute for copper. I should have taken it as a true mark of friendship to have had their reasons on this subject; why a new thought in mechanism will not answer the end proposed without experiment made, or reasons given, may be compared to cutting the gordian knot in the stead of untying it.

THE ADVERTISEMENT IS AS FOLLOWS:

To the Superintendants in the Constructions of Vessels of War, to be built in the United States, and the Merchants generally. May 5, 1799.

GENTLEMEN,

ABOUT four years back the philosophical society in Philadelphia offered a premium for the best method of preserving peach trees from decay. Mine were all in a sickly state, some of them nearly dead, but did not know this was the general case in our country, which put me on trying experiments. They have my minute process, and the happy result was, my trees all recovered, and have since borne a redundance of fruit. As to their premium, I informed them I could not think of accepting it.

In trying whale oil to the worms that were found in the trees, observed that one drop killed them effectually. A thought struck me that well tanned soal leather could be so well filled with oil, that it would be an excellent and cheap substitute for copper to the bottoms of vessels, to skreen them from worms. This I laid before the society, and pointed out a cheap and easy method to ascertain it effectually, but have not heard from them on this subject; though I think it would not have degraded them in point of utility to their country, or true philosophy.

By a late process, I have so filled the pores of leather with oil, that I think little risque would be run in ensuring it from the depredations of all the worms in Neptune's kingdom. The leather can be laid on very smooth, and so tight as to prevent much leakage even where the caulking is faulty. Iron nails may be used, as the oil in the leather will keep them from rust by salt water, and certainly such a bottom will glide like oil over the surface of the great deep. I have observed vessels' bottoms that had made long voyages, full of barnacles, and a kind of grass five or six inches long; this must be a great obstruction to their speed. Now I apprehend that no kind of trash can adhere to oil, and a vessel going a voyage to India would arrive as clean as she left our ports.

I am not acquainted with the expense of sheathing with copper, but suppose it a dear article, the money for the purchase must centre in other countries. The piece of leather above noticed is 36 inches by 18, weighs 5 1-4lb. If I am supplied with proper hides, will contract at a reasonable price, and have them properly manufactured.

I am aware of an objection that will arise, that so much leather used for this purpose will affect other uses for that article, and raise the price—To this it may be observed, that the yearly exports will shew, that more hides are shipped yearly from this to other countries than would fully answer the above consumption, and the manufactory lost to our country.

I have now fairly laid this matter before the publick, if it is gone into I shall think myself entitled to an exclusive right, not for my own emolument, as I have weathered my tenth climacterick, and suppose the sexton has his eye on me. But I have three sons, men of character, bred to the tanning business, two of whose families are fast increasing.

I leave my name with the printer hereof, if any gentleman thinks proper to write to me on the above subject, he shall be duly attended to.

H. G.

Thus far the advertisement.

SIR,

ON inquiring into the property of copper to the bottoms of vessels, I find it is an agreed point by ship carpenters and merchants, acquainted therewith, that it does not last more than five or six years, that it corrodes and rusts out in that time by the effects of salt water. Now if this is so, it must draw too hard on the publick finances to make use of it in our ships of war and come too dear for the merchantile interest; besides I lately received a letter from a merchant, wherein he assures me that it does not effectually secure vessels from worms. From which it may be remarked, that the corroding of the copper must have a very baneful effect on the plank, and soon put it in a very decaying state, and also on the heads of spikes and bolts that are meant to secure the bottom.

Now if it can be made clear, that our own country yields materials in abundance, more suitable for this purpose, at perhaps less than half the expense, the cash rests among us, which I am yet of opinion it does; the time will come when it will with justice be said, copper is a poor substitute for leather for sheathing vessels.

In a small piece of leather 19 by 13 inches, lately sent to the office of the Secretary of State, for the purpose of taking out a patent, is infused 16 ounces of oil. And I think it not a hazard on true philosophical principles to say, that it is not possible for grass, barnacles, or worms, either to adhere or penetrate it; and was it affixed to the bottom of vessels going to India, it would come up fully to my advertisement—for the following reasons: First, the great repugnance in the nature of all kind of worms against oil, will prevent them from penetrating it: Second, the constant working of the water, even in harbours, will prevent their adhesion, as they may as well stick to smooth ice or glass, as oil. The glutinous substance of pitch in hot climates, is the reason (as I take it) of their easy adhesion, and soon destroying a new vessel. As to the duration of leather in this use, nothing but the iron teeth of time can wear it out.

Here your sagacity will point out a question: Will not the sea water draw the oil out of the leather and put it in a decaying state? To this it may be answered, that it is well known to curriers, in softening leather for shoes, that the oil is put on the leath-

er when wet, and the oil cold; yet it penetrates the leather and drives the water out, being more penetrating and subtile than water.

There is no doubt but that many of our vessels using the West India trade, are much worm eaten, though otherwise sound, and often damage cargoes, let the greatest care and industry be taken by the honest and brave sailors, and pump as they will—All this can be avoided as I apprehend; let the vessel be hove down, the pitch scraped off, clean the holes the worms have made with a brush, take boiling hot oil, pay the parts affected, put on the prepared leather, and every worm in the bottom must soon perish. It is well known that there is no vessel launched but has plank, more or less what is called, wind shaken, which escapes the eye of the most attentive and honest workman, and when she comes to encounter a storm or heavy sea, these cracks open, and often the caulking works out in spots; the cargo spoiled, and perhaps she sinks. Now to prevent all this risque of property, and what is of infinite more value, the lives of our brave sailors; I am fully of opinion that the proposed sheathing may be so affixed as to prevent the caulking working out, and any leakage from wind cracks, as the pressure of the vessel comes wholly on the sheathing which it will be fully able to bear.

Now if we are right so far, it will follow, that insuring such a vessel will be had at a much less premium, and the merchants soon made whole for the expense of sheathing. The difference

will be in some proportion to two men of equal prowess going to encounter, the one naked, the other in a leather coat of mail that cannot be pierced by the weapon of his antagonist.

It perhaps may not be amiss to observe, that a new vessel after the deck is caulked, in the stead of using pitch as is commonly done, which soon wears off, let the plank be well paid with hot oil, which will penetrate the fourth of an inch or more, which will close the pores and prevent it from being affected by water, and preserve it from soon decaying.

Let us for a moment cast an eye on a water fowl, that nature has furnished with a deposit of oil.—See how she dives, gambols, plays antick tricks, and not one of her feathers is water soaked; if by chance any get rumpled, she smooths them down, takes with her bill a little oil, rubs it over the part affected, and is again ready to dive for food or play. Sir you will be pleased to pardon my pen for taking a flight among the ducks.

It is well known that some of our American built vessels decay in eight or ten years, and the fault is laid on the climate or the texture of the timber; neither of these is the true reason, (as I apprehend) and am fully of opinion, that a little cost and thought, will keep them sound for thirty or fifty years, perhaps longer. This in time, as our country abounds in timber and iron, would draw orders from parts of Europe where those ar-

ticles are scarce, and would employ thousands of our fellow citizens to good purposes.

Soon after the publication of the above advertisement, the secretary of the navy wrote an order for a piece of prepared leather, which was sent to him; whether he has put it in a way of proof or not, I have not the pleasure of knowing, and as it is a new thought in mechanism, it is not expected that the publick will generally go into its use before an experiment and certain demonstration of its utility is ascertained. Wherefore, not depending farther on any one to put it in a way of proof, I have sent it prepared in several directions at my own expense, and when the result comes to hand, which will not be until October next, shall, if so long spared on this side of time, lay it with pleasure before you and the publick. I need not point out to your sagacity the advantage it will be to our rising navy, the merchantile interest and our country generally, if it answers the end proposed. Submitting all these matters to your philosophical penetration,

I am with much esteem,

Sir, your most humble servant,

HENRY GUEST.

SIR,

I PROMISED in my letter of February, 1800, to inform you of the result of my experiments, whether those worms that destroy the bottoms of vessels, would or could penetrate leather prepared with oil or not. For this purpose and for full trial to ascertain this matter, a piece was sent to Curracoa, where it is well known that those worms are as destructive as in any part of the world, by Capt. Robert Jones of New-York—and to have this matter fully authenticated, I wrote to Mr. Philips our consul there, that he might have some directions, and give me his opinion when a trial had been made.

I also sent a piece of leather prepared to Charleston, but have not had any account from the person that was recommended to me for his assiduity in business; in the interim I received a letter from a gentleman high in office in our general government, recommending a trial to be made in the harbours of New-York and Amboy. And about the same time got information that some person for a trial, had some time back sunk several pieces of timber in the harbour of New-York, prepared with divers ingredients, (but none with oil) and when taken up they were all perforated by the worms. I had two boards seven feet long on which was nailed prepared leather, twelve by eighteen inches long, sunk one in the East and one in the North river, where they remained four months, and when taken up there was not the least sign of worms or

any other vermine touching them. The leathe cut as fresh as ever, it has neither swelled shrunk, and by warming it, can press out the oil- a piece thrown in the fire burns like the wick of lamp, which clearly shews what I observed in m letter of February, 1800, lately published, that o is more subtile than water.

But before I proceed in the detail of the boa that was sunk below Amboy, think it proper to o serve, that in making further experiments with o found that it could be forced through a two inc seasoned white oak plank, but that the princip part lodged in the fourth of an inch on the surface —on farther trial found there could easily be in fused six ounces in a square foot, by which I wa induced to have a board seven feet long properl oiled, and sunk in York harbour, but as yet it i not to be found. About the same time was sun below Amboy, about twenty miles from the sea a seasoned pitch pine board eight feet long, abou two feet of which was oiled, next to which wa nailed a piece of prepared leather twelve by eigh teen inches, where they remained four months- when taken up the leather and the part of the boar oiled, was in the same state as when it was sunk The part of the board in its natural state is perfo ated in several places with large holes, but no through, though a hard pitch pine, a number o barnacles are affixed, and that kind of sea grass that grows to the bottoms of vessels in long voy ages nearly overspreading it. All the above de

scribed matters may be examined by any person that is pleased to call at my dwelling.—Now from these premises it may not be improper to observe, that to sheath a vessel either new or old, the following method will answer:—Let the bottom be well caulked, and the seams paid with good stuff, let the planks be paid two or three times over with hot oil, then nail over the seems a strip of prepared leather. This will keep the caulking from working out, which is not the case at present, and for want of this precaution, many a good ship with all its contents, has gone to the bottom. This can be done at a trifling expense, and I am fully of opinion that from the little experiments and trials already made, that no worms, sea grass, or barnacles could adhere to the bottom in a voyage around the globe.

Perhaps there may arise in the mind of thinking men this question: will not the leather in time putrify and dissolve in the water—to this it may be answered, that it is the essence of bark that cures the hide, by which it acquires such a consitence as to be indissolvable by water; a familiar proof may be realized by examining the box of a pump that has been wet for years, it in time wears out by friction, but never dissolves: take a salted dry hide, it will bring up the water in a pump a week or two, but in a warm climate not so long, it will become putrid and dissolve in a few days.

Again it may be asked, why all this anxiety and expense for the security of the bottoms of vessels,

when it is well known that several of our new ships of war have been under repair, with their principal timbers rotten and not worth sheathing even with corroding copper, much less with tough and lasting leather. The rub lays in building them in a hurry, with green timber and not in its texture.—In my next number I shall endeavour to point out a method how timber may be seasoned sooner than by the usual method of time, and if I do not hit the opinion of philosophers, yet I trust they will excuse me the attempt, as aiming at a matter our country at present stands greatly in need of.

HENRY GUEST.

The subscriber has lately taken out a patent according to the laws of our general government for new discoveries—Any person in the shipping line that thinks proper to apply to him for the above purposes will be duly attended to on liberal principles.

CERTIFICATE.

I do hereby certify, that on the 18th of February, 1800, I nailed a piece of sole leather that was well charged with oil, on a piece of timber in the harbour of Curracoa, and on the 20th of February, 1801, I examined the same in company with Mr. Benjamin H. Philips, consul of the United States for the port above mentioned, we found the leather was not in the least injured by worms, neither was there any barnacles on it, from which experiment I am fully convinced sole leather prepared as above mentioned, would be a valuable substitute for copper in sheathing the bottoms of vessels, as it ap-

pears that worms which are so destructive to vessels cannot penetrate such leather.

ROBT. JONES.

New-York, March 6th, 1801.

ACCORDING to my engagement, in my last publication, that I would give my opinion, how timber may be seasoned much sooner than the common method by time; but before I touch upon that subject, wish to make a few observations on the rapid decay of those ships of war lately built in our country, at an enormous expense. I felt shocked, when made acquainted that some of them were then under repair, with part of their timbers absolutely rotten, in three or four years from the stocks: and that too, with live oak, imported from Georgia, at perhaps double the expense of our best white oak.

It appears to me, that if live oak is more durable than white oak, that these timbers must have been very defective and tender, before they were used. It is well known to our farmers, that in making common fence, green timber set in any kind of soil, the posts will last from fifteen to twenty years. Indeed I have white oak posts in the use of a barrack, that were put in the ground more than thirty years, and are yet sound, though taken immediately from the stump. It may be conceded that green timber placed between the bottom and ceiling of a vessel, where no air can come, may decay in eight or ten years, but not sooner if sound when used. The expense, either to the publick or merchant, in

building vessels is great; and if our shipwrights go on building with unseasoned timber, it must stop the most valuable and necessary branch of mechanism in the United States. For it is presumable, that as our country abounds with good timber and iron, many orders from countries deficient in those articles, would apply to them, provided their vessels would last fifty or sixty years; which there is no doubt they would, if the timber was properly seasoned. But, as we at present have no arsenals of seasoned timber, either publick or private, to quicken the seasoning, I have thought of the following method:—As it is put up in the frame of the vessel, let a tunnel hole be immediately bored within a foot or eighteen inches of each other, according to the bigness of the timber; keep the vessel in her frame six to twelve months before planked, the air in the timber will force out the sap, or the weight of the atmosphere will drive them both out. No matter whether the hook catches the fish, or the fish catches the hook, if the end of angling is obtained. Bore the small timber also, as that will prevent its cracking in the sun and air. I will venture to say, and wish it to be tryed, that a large piece of timber, twenty feet long laid under cover, where the air can freely come to it, without boring, will decay before it seasons. My reasons are, that the air in large timber has not force enough to throw out the sap, it ferments, but the fermentation is not strong enough to press out the sap lengthways as the veins of the timber run; being too remote from

the ends, and too weak to split the timber. A small piece of timber, such as the beam of a house, let it be ever so long, it will season in a few years; because the air and the sap fermenting, will force its way in cracks from the heart, as is to be observed in the beam of a house. And if hereafter, magazines of timber should be laid up to season, there is no doubt to me, that it ought to be bored before laid up; for the sooner the sap is taken out the tougher and more lasting it will be. Possibly boring promiscuously some of the holes may come in the seams of the bottom, this can be easily remedied by driving a plug of cedar or pine on each side the timber, an inch or two long.

I have now laid down what I proposed. If any ingenious man can devise a better method to season timber sooner, it is wished he would come forward and publish his thoughts, and I will bow to his superior judgment.

HENRY GUEST.

P. S. It would be a laughable subject if it was not for the direful effects, to read the publication of a launching, something like the following, to shew the dexterity of our workmen:—That a most superb ship of eight hundred tons, has been built and launched, in nine months from laying the keel, and fifteen months from the stump. That his excellency, the president of the United States, gave his attendance, with all the beautiful

ladies in the vicinity, bedizoned off like queens of the May; and all the pretty gentlemen within ten miles round. As soon as the shores were gently taken away, she moved with grace and majestic motion, to the element she was designed for. Neptune with open arms floated her on the surface of his bosom. The dolphins skipped on deck, and with their tails beat time the noble tune of Yankee doodle, that resounded from the shore! The trydants with their mermaid doxies, flourishing their tails above the water, and dancing the hays, three times three around her lovely form!

All this flourish would do very well, if the timber had been well seasoned, so as to last a century. But when this superb ship is eight or ten years old, when she ought to be as staunch as ever, the sailors are wondering to see swimming, sometimes along side, and sometimes near the stem, great monsters of sharks, from twelve to seventeen feet long, and as big round as a hogshead, with mouths that would take in a bear, with double rows of teeth, that can snap a horse in two; little considering, that their scent is equal to the scent of hounds. They smell the timber in the ship, rotten, and are only waiting for a storm to shiver her; when, without much ceremony they swallow the whole crew, captain, passengers, and all, for they are voracious dogs.

H. G.

Sir,

I NOW take up a few minutes, to make one observation or two, on the most proper time to fall timber, when there is the least sap in it, and shall shew from actual experiment what time in the year it is so consolidated, as not to shrink.

I am well aware, that to combat a long fixed prejudice in favour of any matter, and to fully explain it by argument, would be a theme for the most abstract reasoner, to which I feel myself little adequate: but such as it shall be given, and if hereafter it is found to be of service to our country, so be it.

Perhaps from time immemorial it has been fixed in the mind of the publick, that to have timber lasting, and when the sap is supposed to be in the root, is about the old of the moon in February, and is the only proper time to fall the trees. This I take to be a mistake. Let it be tried, and it will be found to shrink much when it comes to be properly seasoned; which shews, that at that time the veins are swelled with sap which is then rising. It may be here remarked, that the sap begins to rise in the heart, which is farthest from the external cold, and finally, between the solid wood and the bark, which loosens it for tanners' use; but not till the sap has reached the remote boughs, swelled the buds, and the leaves are beginning to form, and in some trees, not till the leaves are fully grown, which in this latitude, will not be generally, before the middle of May. This shews, that the sap is long in rising,

and there is no doubt in my mind, that it is rising long before February sets in. Now if we refer to Canada and our northern country, it will be found, that the sugar trees are ready to deliver their sap about the first of February, but that their leaves do not expand sooner than the oak, if I am rightly informed.

I now come to observe what to me is a full proof of my position—Formerly when our winters sat in regularly with snow about the first of December, our farmers took that opportunity to cut down such trees as they wanted sawed, and with their sleds took the logs to the mills through the months of December, January, and February;—Any of these logs laying to some time in May or June when the weather became hot, sat the sap in such quick motion, and so abundant, as to loosen the bark—I will just observe, that certainly the source of the sap was cut off when the trees were fell in December, January, and February.—This circumstance does not rest wholly on the writer hereof, but it is capable of abundant proof.

Now to shew the season in which there is the least sap in our oak timber, and when it is most solid, take the following simple relation of a fact.—A Mr. ———— of this county was allowed, and so is his son at this time, to be the best of workmen, and to finish the most substantial and durable wheel carriages in our country. He found by experiment that white oak timber, fell in the month of September, would not shrink, although worked imme-

diately from the stump—He was perhaps a little superstitious, as it is said, he watched the very hour, and would even leave his bed and fall his trees. Twenty years since, I had occasion for a parcel of white oak seasoned plank; I applied at all the saw mills around, but could find none—about the middle of September, meeting with an elderly man, a ship carpenter, whom I had long known to be an honest and useful citizen, he asked me if I had any good white oak trees? I told him, I had of the best—go, replied he, cut it down, and saw it green as it is, I will engage it shall never shrink: necessity has no law, and I made the experiment—the plank were thirty two feet long, sixteen inches wide and two inches thick, and I could never observe that they shrunk an hair's breadth. Now from these principles it may be inferred, that as soon as the leaves begin to turn yellow, the sap is wasted or returned to the root, and that the timber is solid, and so I thing it will remain, not only in September, but in October, which would be time enough to fall timber for the ensuing year.

HENRY GUEST.

New-Brunswick, March 23, 1801.

Please to turn to the last page

Sir,

Your letter of May last, came duly to han and I am obliged to you for your enquiry why t publick is disappointed in their expectations in beil in some measure supplied, through my meal with oil and Gurry. As you took some pains getting me a patent in Pennsylvania, you are e titled to make inquiry in this matter, and wh you have read the following relation, you will be s tisfied that it was by no means by the want of atte tion, industry, or judgment in me, that this matt failed.

I gave one half of my Jersey patent, without fe or reward, to two of my friends that had been, t the war, thrown out of mercantile business;—on of them, by my directions, went, early in the season, to Tom's River about fifty miles from this town, to put up necessary works. He had been there but a short time before he, with three hands, were surprised and taken prisoners by the tories from N. York, with a magistrate, that was the collector of that district, with a large sum of congress money.—Luckily they came too that night within the hook when a gale of wind sprung up that like to have sunk them. They were obliged to run upon Jersey shore, where they all got off with the whole of the money, and the plunder they had taken from the inhabitants of the shore. This was to me an unexpected and discouraging stroke. However it would not do to give up for one disaster. As we wanted a number of hands to carry on our bu-

iness, I hired six stout young men at this place, hat I knew would fight when occasion—one of which was my eldest son.—These, with three already engaged, were all well armed, and with ammunition proper, with a very large stout mastiff, or our centy at night. We had three new seins rom 75 to 80 fathoms long, with two proper fishing oats. With this preparation I went to Tom's River, about the middle of July, when the mosbonkers usually begin to school, expecting to come up fully to the expectation I had raised in the publick. I kept the hands fishing every day, ometimes in Tom's River, at other times in he Bay, but could get only a few straggling of hose fish. The inhabitants, one and all, encouraged me to stay, assured that there had never been a eason in their memory, that they had failed coming in great abundance. July, August, and September wore away, but all to no purpose; and what eemed most wonderful to the inhabitants was, that we fished daily in those places that were usual in other seasons to take abundance of other fish, such as pearch, bass, blue fish, sheap's head, &c. and that the same industry in other seasons would have supplied the whole shore in that neighbourhood; but we took but little more than supplied our own people.

A droll fellow among our lads, insisted that by some legerdemain, the tories had given the fish notice of my patents and design on them, and had left their usual feeding ground on that account.

However I believe that I suspected the true reason was the daily noise of small arms and swivels on the rivers and bay. The inhabitants that were termed tories from the hook to Cape May, had a constant correspondence in open boats to New-York for their produce, and there was also a constant trade carried on from Philadelphia through Egg-harbour and other parts of the shore for dry goods. These the wig parties termed London traders; and fitted out gun boats and took many of them, sometimes with hard fighting and lives lost. This I believe was the true reason that the fish left their usual feeding ground, for though fish have no ears, they are much affected by noise; it must be by the concussion of the water. I will venture to say, that let the fish on the sea bass bank, bite ever so briskly where the water is from fifteen to twenty fathoms deep, a clap of thunder, or a cannon fired over them, they will immediately leave biting; something like this I had experienced. Thus, Sir, all my sanguine hopes to supply our country with oil and Gurry failed with loss of a considerable sum of money—it is well that it was congress money, that, with a much larger sum was finally sunk in my hands, that I had with hard industry accumulated. But Sir, I did not stop here in my endeavours to make oil, which will be the subject of my next letter.

I am yours &c.
HENRY GUEST.

Sir,

I am now to acquaint you of my entering wholly at my own expense on a new scene to furnish our country with some oil. I was assured by a very honest man that lived on the beach, that there was a species of whales that came from the eastward every season, that their first stop was on feeding ground on the shoals off the east end of Long Island, where there was whaleing carried on from the beach, that about the first of October, they come on feeding ground, between Cranberry inlet, and Little Eggharbour, a space of about 40 or 50 miles, and continued there until the winter set in, when they went southward and returned the 1st of February, and staid about the 1st of April, and then went again to the east, that they yielded, on an average, about 50 barrels of good oil; that he had counted from the beach fourteen of these whales up spouting at one time. All this I believe to this day to be strictly true, which induced me to have an excellent whale boat built, with proper tackling and provisions provided for 6 men for two months; an old whaler was found to superintend this business; but in the stead of whaleing, they went to privateering, and took London traders. A brig from the West Indies, off Cranbury inlet, was first boarded by them—They and a gun boat brought her into the bay; her cargo consisted of rum and sugar, which was sold at the head of Tom's River. These matters did not come to my knowlege soon enough to

do myself some justice: for when I came there, my whalemen had received their dividends, and were decamped, and had sold all the tackling that were provided for whaleing, and swallowed all the provisions. Here I think I see you smile, and even laugh at my credulity in trusting property in the hands of the lowest grade of man. But you will please to take this along with your laugh, that I had put my confidence in the highest grade of man, and had taken their paper money as 10 to 8, and at that time it was reduced to 60 for 1. These were but trifling losses to what I suffered by its depreciation in the end of its career—peace to its manes, it did wonders in its flourishing day. Relying on the notice I had received from the honest man that lived on the beach, I ventured a third time to make oil, which will be the subject of my next letter; in the interim,

I am

Your humble serv't.

HENRY GUEST.

SIR,

I found two men in Morris county, in this state, who had been in the whaleing business, one as a steersman, the other harpooner, who had property in that county. These I engaged, and got new tackling for that purpose, hired rowers, and furnished two months provisions, in the spring season; they joined a set of expert whalemen, of the name of Hindman, near Barnagat inlet.

In the course of February and March, they took three whales, one of which was a sucking calf of a year old. They yielded a hundred and thirty-three barrels of good oil.—This was my last essay in these matters, as the peace was likely to come on, and a supply of oil would come on in the old and usual way. The business of whaleing is still carried on from that beach, as I am informed; but they are under great disadvantages for want of a proper vessel to lay constantly off near the shore. Whales often come in sight of the shore when the surf of the sea runs so high that they cannot go off in their small boats. This was a great obstruction to that business when I was concerned: for in the stead of taking three, it is probable they would have taken twice that number—this seemed to be the opinion of the men I was concerned with. There is another circumstance I think proper to notice. In the course of their whaleing they found there were a plenty of cod fish to be had near the shore. I apprehend that this coming to the knowledge of Capt. Smith, then in this town, caused him to make

a trial, having a proper vessel for that purpos
But this relation must be the subject of my ne
letter.

SIR,

Three winters back, being a moderate time
Capt. Smith, of this town, found a plenty o
cod fish from 1 to 5 miles from the shore. This
and the following relation I had from one of his
hands, as the Captain, soon after his last trip, sold
his vessel and removed to some part on the eas
end of Long Island; it seems his practice was to
run into the inlet at Little Eggharbour every
night, and when the weather was fair, went out to
fish; they were never disappointed in getting as
many as their time would admit. The day follow-
ing was spent in cleaning and corning them down
in bulk; in a fine day they took 1100 by ten
o'clock in the morning, and some of the largest
that I ever heard of. When they had got a cargo,
they went to New-York and sold it; the last cargo
was brought to this town and were excellent.
They were new hands at this business. Had the
hardy, indefatigable, intrepid sons of our eastern
states been in this business, they would not have
looked for a harbour until they had their quantum
and made two or three trips to their one. But I
suppose this mine of treasure is to them to this
day unknown, or they would not go to the banks
of Newfoundland to fish among the ice where per-
haps the depth of water is six times more, when here

there is never any ice to trouble them, besides they would not only have the ready market of New-York, but in addition thereto, would have a ready sale for their fish, by supplying the cities of Philadelphia and Burlington daily over land, seven months in the year from Little Eggharbour, which I take to be but one day's journey. Can it be that the citizens of Philadelphia are yet unacquainted with this bank of health and treasure so much in their power, when it has been known in their neighbourhood since I engaged in the whaleing business in 1781.

But to return to the above narrative, I ask my informer what ground the Cod were found on, whether muscles were found in their craws or paunch. He assured me the bottom was sand and their paunch was filled with sea crabs, and that the fish was very fat and healthy. He also assured me that every day they were out, whales more or less were playing around them, but that they were not prepared for the whaleing business, or the whole crew would have made an India voyage. The above relation is as near as my memory serves me, and I should judge when they come to be generally known, our country will avail itself of the advantage here laid open. If so it will be an opening for many industrious and honest families to get subsistance, serve our country with wholesome and delicious food, and with a quantity of good oil, at small expense, and be a very general advantage. And although I have suffered much in my proper-

ty in these affairs, I shall think my time and money spent to a good purpose.

New-Brunswick, June, 1805.

MR. BLAUVELT,

SIR,

Looking over my old papers, I find a letter, the copy of which was, in 1775, addressed to Mr. Aitkins at Philadelphia; but, if my memory serves me, he curtailed the contents that I thought essential to the well being of my fellow mortals; and I believe his publication did little good to our country—perhaps it was too prolix for his magazine. As you are now about printing a small pamphlet on my own expense, be pleased to give it fully, with cases that have occurred since: perhaps some of them may be of use to the afflicted part of our species.

HENRY GUEST.

New-Brunswick, March 27th, 1775.

MR. AITKEN,

SIR.

As your magazine is generally read throughout America, I have thought it proper to send you an extract from the London Magazine for August 1760, with three cases of the like import that have fallen under my observation since reading it, which I doubt not but that you will think it proper to publish in your useful Magazine for May next, as I apprehend you will take a particular pleasure in

every discovery that tends to promote the welfare of mankind, or to ease the pains of the afflicted part of our fellow creatures.

A remedy for lameness produced by a fixed contraction of the parts affected, by Doctor Lobb, of London. Take the yolk of a new laid egg, let it be beaten with a spoon to the greatest thinness, then by a spoon full at a time, add three ounces of pure water, agitating the mixture continually that the egg and water may be well incorporated. This liquor may be applied to the parts contracted, cold, or only milk warm, by a gentle friction for a few minutes three or four times a day. This remedy I have since advised in like cases and with the like happy success, and others to whom I have communicated it, have found the same advantage from it in such cases. And as this communication may be useful to persons lame by contraction of some muscles of the body, I hope it will be acceptable to the publick.

SIR, *To the Author, July 25th, 1760.*

Yesterday Mr. Morris came and returned me thanks for my account of the egg liquor, (see the preceeding rrticle) which gave me an opportunity of writing from his own mouth, the narrative of his case. It proves that the outward application of the egg liquor, is not only an effectual remedy against fixed contractions of the muscles of the body, but also against the palsy. THO. LOBB

Bagnio court, New-Gate street.

Mr. William Morris, of New street, in Cloth Fair, aged 61 years, a barber by trade, and the watchman in Bartholomew Close, was taken on Friday, June 13th, 1760, about eight o'clock in the evening with the palsey in his right hand, so far as his wrist. He had no pain and no feeling either in his hand or fingers, which became useless. He was three weeks an out patient at St. Bartholomew's hospital, and used a variety of medicine without benefit. July 5th he read Dr. Lobb's account of a boy cured of a lameness by the outward application of a liquor made with the yolk of a new laid egg and water, and resolved to try it. In two or three days after he began the use of the egg liquor, his wife rubbed his hand and fingers with it three or four times a day, for about a quarter of an hour, and in about a week's time he recovered the use of of his hand, and became able to shave again.—Attest,

WILLIAM MORRIS,
SUSAN MORRIS, his wife, and
MARY MORRIS, his daughter.

July 25, 1760.

Case the first. The first case in which I recommended the egg liquor, was about the year 1765. A gentleman (Mr. Joseph Forman, Merchant) in the city of New-York, aged 63 years, was taken, with the palsy in his knee; his wife made use of the flesh brush to the part affected immediately, but he received no benefit from it. I recommended the use of the egg liquor, which was used a few days, and he recovered the use of his leg perfectly.

Second case. Happening to be in the city of Albany, in April 1769, found my friend, Gosack Van Schaack, a young man, with his arm as far as his elbow withered, his hand cramped and entirely useless, occasioned by his falling to sleep with his head resting on his arm and hand on the back of a chair. He had been in this condition for some months, cannot say exactly how long; but he was out of hopes of having his hand restored, as he had applied to several physicians without effect. I recommended the egg liquor and use of the flesh brush, which was closely applied, and to the great joy of himself and friends, his hand and wrist were restored to their usual bigness, and strength, in a very little time, I cannot say exactly how long, as I write these cases only from memory, it is impossible for me to be more particular, and it is probable they would have lain dormant forever had not the following recent and very extraordinary cure been effected by this simple, cheap, and sovereign remedy.

Third case. Cornelius Nefe, at the falls of Passaick on Second River, in Bergen county in this province, now aged 34 years, a healthy, bony, strong, labouring man, was taken with the palsy in his left arm, from the shoulder to the end of his fingers, in August 1772; he immediately applied to a surgeon, who tried to bleed him in the arm affected, but no blood could be drawn. Nettles were applied without any sensation; the spirits of camphire was tried about two months; he applied to various doctors without effect. He was advised to bathe his arm in cold water, and rub it every time it was bathed, with a coarse linen cloth, which he did several times a day for months, but without effect. Hearing of his case, I desired him, by one of his relations, to come to me, which he did about the 10th of March 1774. On examining his arm, I found it less than the other, at least by a third part, and so useless, when he sat down, it swang back and was obliged to use his right hand to bring it on his thigh. This with the long time it had been in this miserable state, put me almost out of hopes of being of the least service to him. However I told him that if he would engage to come up to the rule that I would lay down for him in this experiment, I would gladly inform him fully. He was extremely anxious of being restored, as he had a wife and six small children that depended, for support, on the restoration of his, I may say, dead limb. He assured me that nothing should be wanting in him

to give the experiment a fair chance. I engaged him to use the egg liquor, taking a gill at a time of soft water to one yolk, and dip a flesh brush in it, and rub his arm very well from the shoulder to the ends of his fingers 4 or 5 times a day, 10 or 12 minutes at a time, and to continue this course at least three months before he gave up hopes of a cure. This he promised faithfully to perform. March 25th 1775, the goodness of providence has blessed the means used. He has now called on me to return me his very particular thanks, and I take the relation of the benefit he has received, from his mouth. He tells me he rubbed his arm, hand and fingers at first at least seven or eight times in twenty-four hours, from about the 15th of March to the 1st of May, without observing the least sensation in them; but about the 3d of May he found considerable pain from the elbow as far as the wrist; it seemed as if ten thousand pins were pricking him in that part; this is his expression:—This continued pretty constantly, and in a few days he felt the like pain in all his fingers; soon after he could feel the brush when rubbing those parts, and observed the colour on the surface alter. He continued the process now with good hopes; his arm and fingers grew gradually in bigness and strength, and by the first of August did a little work in harvest, and soon after could plough, chop wood, &c. His arm and fingers are now in their full state, and observes that he has as much strength in them as ever he had. His thumb is yet in its lame state; it seems he has not taken any

pains to restore it since he has been able to work, but has promised to continue the medicine on that member also.

Memorandum, June 1805.

The above C. Nefe, in the time of our noble struggle with the Britains, had a negro ran away to Staten Island, got a permit to go there, where he sold him for one hundred pounds in silver—was murdered and robbed, supposed by the Refugees on Bergen Neck.

Samuel Mulford, a house carpenter, by some accident hurt his leg badly and was attended by the best surgeons in this part of our country, but it grew from bad to worse, and he was attacked by a fever, his doctors gave him up as uncurable. An Indian woman at length undertook to cure him, for which means she got the leaves of beech trees, some of which she boiled and washed the sores with a strong decoction, two or three times a day, and laid the leaves on the sore parts—in a very short time she healed the leg and made it sound. This matter would have laid dormant if it had not been for the following extraordinary case:

Mr. Thomas Harden of the city of New-York,

a batter by trade, had a cancer on his breast that grew rapidly worse and worse, attended by the ablest doctors in the city, but they could do him no service. There lived in this town at that time a very eminent physician and surgeon, a Scotch gentleman by the name of Wood, who undertook to cure him, but the cancer eat so rapidly, that with his costic and knife, he was obliged to cut the whole of the flesh from below the paps to near his neck, entirely off the bones. This the writer hereof has repeatedly seen. Upon the whole, his doctor gave him up as incurable. The Indian woman being still in the neighbourhood, undertook to cure him; she used the same means as she did by Mr. Mulford---in a very short time, the flesh on his breast bones began to heal and grew very fast; finally she made a perfect cure of him, and when cured, he had on his whole breast, seams as thick as one's finger. Without doubt, there are still living in the city of New-York, many witnesses that have seen the seams on his breast, for he seemed pleased so shew it and praising his Indian woman where ever he had an opportunity.

Some years back, I had a rapid dropsy come on me, my feet and legs much swelled, the water accumulating in my body, my appetite failing with shortness of breath, made little water, my skin dry, with sluggish sleeping, our best physicians were in the army. I took simple medicine, suffered greatly with thirst; I saw a painful and slow death advancing, and as I had debarred myself from

such food and drink as I judged would feed the disorder. I took a resolution to act as my appetite would take, as it would relieve my pains and should the sooner be at ease among the silent dead. I sent for a flask of Holland gin, and was determined not to suffer drought any longer, and to have one regale at least; I drank a full pint mixed with cold water and sugar; this to a man that seldom used ardent spirits, was hard drinking. The weather was very hot; the heat within and without began to force out a moisture on my skin, which I had not observed for some time. I began to feel better, took another drink, which forced out the sweat pretty rapidly. A thought struck me that it was possible to sweat out this scurvey complaint—took another drink—went to bed about four o'clock in the afternoon—had winter clothing over me—desired my sister if I should lose my senses from the dose I had taken, so as to throw off the covering, to call my sons from their work, and keep me well covered, whatever the consequence might be, until I had a thorough sweat, which very soon came on me in a very profuse degree, and I apprehend was the cause that I kept my senses, as the fumes of the liquor went through the pores of my body, and with it carried off the water and drugs that occasioned the complaint. I sweat all night and did not want to sleep, rose at nine o'clock next morning, and felt as well as ever, with usual spirits; but fearing a return of the disorder I drank a glass of gin every morning, and a strong mixture with

as a diuretic

water at dinner for some time, perhaps six weeks, until it grew so noxious that I could not easily bear the smell of it.

POSITION.

An eminent physician in this state had a son about ten years old, who was so afflicted with convulsion fits, that his parents did not trust him out of their sight; they had shattered his understanding—Being on a visit at his house, I related to him, that I had read a case of a boy in England, much in the same way, cured by accidentally eating a quantity of lintseed oil, which brought great quantities of small worms from the stomach, which relieved him from the fits, and brought him to his understanding. This case was so singular that it was laid before the royal society in London. The doctor soon saw the propriety of trying this experiment; he began with giving his son one table spoonful night and morning, and did not exceed that quantity;—this was so efficacious that his son has never had one fit, since a few days after the first application. It is thought he brought the worms away by stool.

John Grandine, a worthy magistrate of Hunterdon county, in this state, was fat when a boy, and continued growing fatter to about the age of 45 years, when I called to see him, he could scarcely rise from his chair, though a bony strong man; he lamented his unwieldy condition. I related to him that I had read of an eminent physician in England

who was so fat that he was obliged to be carried in a litter to visit his patients; that to reduce his fat, he took Castile soap, dissolved in water, and that in a few months he was able to walk as other men. On hearing the above relation, he immediately put a piece of Castile soap in his mouth, and swallowed it as it dissolved, and continued this course until he became so habituated to it, as other men are to tobacco. In about twelve months I received his letter of thanks, informing that his fat was so reduced, that if there was occasion, he could plough all day —that he could mount a horse, and could ride as well as at twenty-five years old, and that it had eradicated a painful, gravelly complaint.

Perhaps fourty years back, I was in Philadelphia, in the time of very hot weather, a servant going through the room, I desired to have a glass of water just taken from a pump in the street; I was aware of the coldness and the hard quality of the water, and people dying daily with its use, and still think that I drank less than one gill, it scarcely reached my stomach, when I felt a most intense pain, so that I was observed to turn pale, my friend ordered a physician to be immediately sent for. This I stopped, as there was a kettle of hot water near, I supped it so hot as to scald my mouth a little, in a few minutes the pain abated, I still drank hot water, when a profused sweat burst all my pores open and I was quite relieved. Relating this affair to the late Doctor Bond—this

good man and able physician remarked, that if the most ingenious physicians in the city had been near me, that they could not have devised a better, quicker, or a more sure remedy. On the above relation I think proper to observe, that I, all my days, have been much used to drink water plentifully; that it is the usual drink of labouring men—that no summer goes about without notice of several dying by this disease, before help by laudanum or a doctor can be had —That hot water can be had in any house, in a few minutes. That the above relation should be put in all the Almanacks in our country, as few working men are without them, when this cheap, sure, and easy remedy will be known generally in our country.

Capt. Willit Taylor, of the city of New York, was laid up with a rheumatick complaint, and was attended by the ablest physicians in that city, without doing him any service. As an acquaintance I called to see him; he was placed in a large elbow chair, propped up by pillows, where he sat day and night—I informed him that I had lately been the means of curing a near relation of mine, in the same disorder, and if he would consent to a pretty severe operation, that I would cure him effectually in a few days. He said that he would as in the condition he was in, groaning out his days and nights with extreme pain, he would even run the risk of a sudden death, as he saw no prospect of relief by

any thing that his physicians could do to him. I sent him, though depth of winter, a parcel of the roots of red willow, perhaps a peck, with directions to boil them well two or three hours; take the decoction, put it in a tub, take a matted chair, with part of the bottom out, strip, set over the steam, with blankets close up to the chin, drink some of the decoction, and whenever he could bear it a little hotter, throw a hot brick in the liquor, and if he felt sick, to take some cordial, and continue the operation as long as he could, if it was two hours so much the better; to rest two days, and in all to take three turns of this operation well. All this prescription he communicated to his doctors, when there was shaking of heads; but he was determined to try the operation, and had his doctors present the whole time. He afterwards assured me that he was punctual to all the rules above laid down, and that he could hear the sweat run down in streams, and soon was without pain; his body was well rubbed with towels, a warm shirt put on, went to bed, sweat there a little; sleep soon closed his eyes, nor did he open them again in eight or ten hours, got up without help in the morning, and without pain; but went through with the third operation as directed; was wholly clear all his life afterwards from any rheumatick complaint. A friend of his nearly in the state he had been, was thoroughly cured by the same roots, though they had been so often boiled.

Though this relation is long, I cannot close it

without observing, that Capt. Taylor assured me after his cure, that his principal physician, Doctor B. (I had almost given his name in full) desired and charged him not to let it be known by what means he got cured. Can there be such grovelling, selfish men of liberal education existing?

This cure was about in 1770, if my memory serves me.

SIR,

I think it not amiss to give it as my opinion, That a sweat as above described, would thoroughly and speedily cure the scurvey complaint of dropsies, and be attended with less risk than the one I experienced.

The red willow is such as the little nice baskets for huxters, are made of, and grows in low, swampy, cold ground, and is more like a shrub than a tree.

Perhaps it may be also proper to add, that the root of the large yellow willow has been tryed for the above disorder, and been found not to answer the desired end.

A fowl, a common hen, by several good circumstances was drowned at least 4 hours before taken out of the water, and was really dead. I thought it would not be time lost to make an experiment to bring her to life again, though in hot weather. I took her to the fire, opened her wings, and kept turning her until her feathers and the surface of

her body were warm, at the same time blew my warm breath in her craw, kept the breath in as long as it was thought to continue warm, then let it out, at the same time squeezing the craw gently to press some of the warm air in her intestines. In this part of the process I set in the hot sun. I began this experiment at ten o'clock in the morning, and continued it to about one o'clock, when called to dinner, seeing no signs of live, threw her on the ground, when that force pressed out the air in her body which made a noise. My youngest son, a boy of about ten years old, insisted she was alive, for that she had made a noise; I told him he should have her if he could bring her to life. It seems he took the same method that I had done after dinner, which did not take up more than one hour—to my great surprise I found her staggering about the yard, but looked pale any seemed to be sick, but was well recovered by the next day.—Now from this experiment it may perhaps not be amiss to make a few observations, that whenever human beings are drowned they are generally given up too soon, that at least twenty four hours should be taken in all the best methods that could be devised. An instance of a boy at Allentown, in New-Jersey, drowned in a mill pond, was tried to be brought to by an ingenious physician, but given up and laid out to be buried. A traveller asking the occasion of so many neighbours collecting, was informed, he asked the parents leave to try his method, which was readily given, and in a few hours

brought the boy to life—what his process was I never heard that I recollect. From the process of the hen, I have been of opinion, that a tube made of pewter, which is easily bent to any shape, should be introduced pretty low in the throat, and warm breath blown in, and let out again; it would set the lungs ~~healing~~ going,—at the same time being in a warm bath, and rubbing the temples and all the pulses gently, would give a good chance of bringing to life. If a warm bath cannot be had, rubbing those parts with a strong infusion, and with the tube injecting a little spirits or brandy in the stomach. These are my present thoughts on these matters.

N B. A warm bath is soon made in a hogshead. Half full of cold water, put in as much hot as will make it proper, as it cools add hot water. I am fully of opinion had the late Gen. Washington been put in such a bath an hour at a time, it would have saved his life, as his pores were closed by a sudden cold. His bath would have caused a copious sweat. This process the author has experienced its good effects thirty years since

AGRICULTURAL.

From the American Daily Advertiser.

MR. CLAYPOOLE,

IN the introduction to some ingenious remarks on a cheap substitute for copper on the bottoms of vessels, lately published in your useful paper, I have observed, that the author of these hints has, some years ago, dicovered and communicated to the Philosophical Society, a process by which to preserve peach trees from the ravages of the worm. Not having myself the transactions of that society, nor knowing where to lay my hands on them, permit me, through you, to request a favour of your correspondent to republish, in your gazette the method he so successfully made use of, accompanied by his remarks, as to the quantum of the substitute used, manner and time of application, &c.

The farmers, in this part of the world, are much annoyed by the peach tree worm; and as yet have found no effectual means of ridding themselves of them. Any method of doing so, would really be a valuable present to the community. I beg this gentleman will be assured, I am emboldened to make the request, only by the very laudable and disinterested manner in which it appears he made and imparted the discovery.

A MARYLAND FARMER.

Potomack, May 1, 1799.

Answer to the foregoing.

MR. CLAYPOOLE,

It is with the greatest pleasure I take up my pen to answer the request of the gentleman in Maryland, as published in your very useful paper of the 6th instant, on the subject of preserving peach trees from decay.

My first letter on this subject, to the Philosophical Society, in Philadelphia, was dated 2d June, 1795. In this they were informed of the method I intended to take, when my trees were all in a very sickly state, and the last I find dated the 16th of July following, when they had recovered their full verdure, were healthy, and so remain. They are now in full bloom, so that if the season proves favourable, one tenth of the blossoms will load them with fruit. The method was: The stems of the trees, and the roots near them, were laid bare by taking the earth away; when on examining, found a number of holes, about the bigness of a common gimblet; on probing them, brought out hairy worms of a whitish colour, except the head, and that was brown, with a sharp nose, had a boring motion, and about an inch long. The method taken to destroy them: Burdock leaves were dipped in whale oil, squeezed a little, as they retained rather too much oil, and wrapped about the part affected, and the soil thrown on them that had been taken off: One gallon and a half served 20 trees. The effluvia of the oil must have killed them pretty soon, but as the

properties of nature are often discovered by chance without our sagacity, it may be proper to observe, that there were three trees under which several hives of bees were placed, and from long experience knew they were a set of nice hasty gentry, and sometimes a little waspish, was loth to offend them by the effluvia of oil. Their stems and roots were laid bare, as above, and all recovered. The reason may be, as the worms are very porus, the air entering their holes killed them: From which, am of opinion, if the trees are laid bare, as above, in the spring, and covered before winter sets in, it may answer the desired effect, with taking off the fungus or gum on the body of the tree, under which the worms breed.

Observing a lump nearly as big as an hen's egg about eighteen inches from the ground, cut it open, found two tubes, about an inch long, closed at one end; it seemed to be made up of the inner bark of the tree and gum, very nearly full of worms, about the eighth of an inch long, very brisk, and their heads had a boring motion; they all dissolved in the air. Cutting a little farther in the tree found the dam, and put a small drop of oil on its head; it drew up in a ball, and died instantly. Since I am on this subject, shall I be pardoned in carrying my observations a little farther. It is but of late years that any complaint has come to my knowledge, of these trees so soon decaying; may not the reason be, that formerly they were planted in fields, where the soil was

not manured, and they are now planted in gardens highly cultivated, where all kind of worms are engendered: For I well remember a large peach orchard in the county of Bergen, in this state, was planted on what is called the Sand-Hills, and am of opinion it was an old orchard in 1738, when I knew it, and in 1776, riding over those hills, think it was still in being. The soil was so loose, that in hard winds, the eddies made holes near the orchard, so as to uncover the graves of the natives. When a boy, I used to go with my little companions to get harpoons, stones, axes and skulls of Indians. Now, if I am right in my conjecture, and it could be ascertained (which with a little expense and industry it can be) it will be clear, that a loose sandy soil is the most proper for these kind of trees.

I fear, sir, I shall intrude on the convenience of your paper, but perhaps it may have a good effect for our country, by bringing out publications by other hands, for the salvation of this useful delicious fruit, that may answer better than the above observations.

HENRY GUEST.

New-Jersey, May 10, 1799.

N.B. Since this first publication of this, it has been asserted to have been a bearing orchard sixty years.

LATELY reading the prices current in New-York, found that the price of hemp was 280 dollars per ton. This enormous price put me on thinking on the great disadvantage and discouragement it would be to our building vessels, and navigation generally, if that article was not soon reduced in price. It seems that our merchants are obliged to import hemp from Russia, as little has of late been raised in the United States.

It is presumable that it must be paid from bullion, which must, among other drains, sweep our country of hard cash; as Russia stands in no need of any article raised here, when at the same time our country is capable of not only to supply that article for our own occasions, but in a few years to make it a valuable article for exportation. Should the few observations I shall at present make on this subject, rouse the sleeping genius of our country, to think and act in this necessary matter, this little essay will not be smothered.

There is no doubt in my mind that the single state of New-Jersey, is capable of furnishing as much hemp as is wanted for our own consumption, and whatever quantity might be raised in other states might be exported. Be pleased to take the following matter that I relate from my own knowledge, as nearly as my memory serves me: Being at Mount Hope, in the county of Morris, more than thirty years ago, a gentleman, proprietor, took me to view a piece of swamp, nearly surrounded by high hills, perhaps one hundred acres which he had

drained, on part of it, he had several crops of hemp, that yielded more than half a ton per acre, which had induced him to make a mill to clean it by water, some part of his last crop was left standing for seed, which I saw, it was all very luxuriant, a stalk that stood somewhat single, was not less than fifteen feet high, with many branches that were bowed down with the weight of seed; I tried to span the stalk a foot from the ground, but fell short more than an inch.

Had that part of the country agreed with my friend's health, the example he would have set in raising hemp, would long since have induced others to have gone into his culture, and at this time our country might have been fully supplied with that very necessary article, so that his exit is a general loss to our country, as his mind was opened by a proper education, and his heart susceptible of true friendship.

About two miles to the northwest of Mount Hope is a body of the same kind of soil, perhaps from one to two thousand acres, when I saw it, it was covered with grass as high as a man's shoulders, and it appeared to me to have a fall capable to be drained, so as to be ploughed; and in sundry other parts of the same county, are many hundred acres of the same kind of soil, and if my information is right, the county of Sussex, adjoining, contains many thousand acres, equally rich.

The great bodies of rich meadows at Maidenhead, near Trenton, that formerly used to yield

hemp in abundance, I understand is too wet to be ploughed, whether it is occasioned by the drains being stopt or not, I cannot say, for hemp will not succeed, unless the soil be put in good order.

The many thousand acres of bank meadow in West Jersey, that is very luxuriant in soil, one would judge would produce hundreds of tons of hemp yearly; besides, there are lands in New-Jersey, that have been long worn, with a little manure would produce seven or eight hundred weight of hemp per acre yearly.

I wish not to be understood to confine the culture of hemp to Jersey, by no means, as there is, without doubt, fertile land in every state in the Union that is proper for that purpose, and as I said above, with proper management, in a few years, it would not only supply our own wants, but enrich our country by large exportations yearly.

On the north side of Hackensack river, that puts in from Newark bay, a little above Snake hill, is a creek which I think is called Berry's creek, that partly drains the swamp of about six miles in length, and may be from one to two miles wide; the swamp heads near Hackensack court house. This large tract I apprehend can be easily drained, for I well remember, when a little boy, my crossing it in the summer season many times dry footed, the distance across a narrow neck of land to Hackensack river is short, and within two or three hours sail to New-York; as to the quality of the

soil, I make no doubt but it is as rich as that described in the county of Morris.

Gentlemen of our general government, who it is presumed are now in session for the well being of our country, be so good as to excuse an individual, whose locks are whited by time, when he suggests, that if the publick coffers are in good plight, to keep them so, that government may be enabled to lend at low interest to such as stand in need, to enable them to drain and clear their soil, to send immediately for a ship load of the seed of hemp, to offer a premium for five or seven years for every hundred weight of good well dressed hemp; there will also be found other necessary matter, that may want this kind of aid, to make our new formed government flourish, which is the ardent wish

HENRY GUEST.

New-Brunswick, January 29, 1802.

N B: It is doubtfull whether there is 20 bushels of hemp seed in all Jersey

Mrs. Voorhees, a matron, of about 60 years of age, beloved by all that knew her virtuous conduct so far through life, by a fall bruised the bone of her shin badly; the greatest care possible by her doctors was taken, and every art in their power tried, but all did not avail; it mortified. As I was undressed going to bed, a friend opened my room door and told me that Mrs. Voorhees's leg was to be cut off the next day;—I dressed myself immediately and went to town, perhaps at ten o'clock; she and her husband, one of the best of men, seemed surprised at my visit at that time of night; I told them that providence had sent me there to be the means of saving her leg; she smiled and said it was too late it was past cure;—I examined it & found the whole leg black up to the knee, and so swelled that I wondered it was not burst. I told her that I had a mortification on my own leg some years back, and that I had stopped it by wrapping a wet cloth with rum about it. While I was reasoning with her on this matter her husband went and brought a gallon of strong old rum, a quart was warmed, a large towel dipped in and lapped several times round the leg; this was done every hour, as the heat of the leg absorbed the rum. The whole gallon was used in this way by twelve o'clock next day; the swelling had abated at least four inches. The colour of the leg had turned yellow in spots. It soon came to its natural bigness, and she enjoyed good health and spirits many years afterwards.

P. S. Perhaps good old brandy may also answer the above purpose.

the time of the late war, my eldest son had a long turn of the intermitting fever; there were no jesuits barks to be had in town. Hearing of a doctor in the country, I sent seventeen miles—twelve doses came neatly done up, for which I paid him in hard money, about five times the usual price—eight doses stopped the fever. As it had not the usual colour of jesuits bark, we pulverized some of the dog wood, compared them together, both in colour and taste, and they were exactly alike; after which, I did not trouble my doctor during the war, for his bark; it seems to have all the qualities of the jesuits bark, and have stopped the fever several times with it, once in my own person.

A gentleman some years back, of a very liberal education, in Philadelphia, wrote me that he should be obliged to me for a farther correspondence. I could not think of any matter so material at that time, as giving him the above relation, and expected him to put it in a proper dress for the publick eye, as I simply judged that he would have thought it a matter that should not be lost to our country; but herein I have been mistaken. About one year after the date of my above noted letter, I saw in one of the Philadelphia newspapers, an advertisment by a chemist in Philadelphia, I have his name, that he had a new species of bark, of a brown colour, for sale.

P. S. The dog wood is a shrub to an oak; it

blooms the first in our forest, with a white expanse as large and exactly like a rose, and bears a cluster of seed a little bigger than a grain of wheat, and are so bitter that the birds leave them on the trees, so that they may easily be propogated.

John Grunendike, a worthy farmer in this county, had, for several years, at times, a violent pain in his breast, which took away his appetite, at times, entirely. He grew meagre and thin. The physicians he applied to, judged he was in a deep consumption, and for the last resource, advised him to ride as much as he could on horseback; going through a wood, he broke off the twig of a dog wood, and found it a pleasant bitter, he swallowed the juice; some little time after he grew very sick and was obliged to light from his horse, and had a hard turn of puking, examining what he brought up, found an innumerable quantity of small worms. This struck him that that was his complaint; he kept chewing the twig, and was obliged to light from his horse several times, and every time he brought up a number of small worms, which entirely eased his stomach; after which he drank a strong decoction made of dog wood bark, which entirely relieved him from his complaint; he grew strong and healthy, and lived in health many years afterwards.

Sir,

East New-Jersey, 10th of December, 1802, when General Knox was at the head of the war department, by his order I sent him a coat of mail that could not be penetrated by keenest bayonets or sword of any description, that weighed about six or seven pounds. A full description of it is lodged in the Secretary of State's Office, by leave of Mr. Pickering. The reason of my lodging it there was, that if a war should not happen in the life time of an old man, that our country might avail itself of its advantage when a war did happen. But the Barbary powers are at present troublesome, and as they are fond of boarding with their gun boats, I have thought of a simple instrument that will do for them; it will strike from 30 to 60 deadly strokes in a minute, and always keep charged. I am getting one made. This, with the coat of mail, in the hands of a few brave and active men, I am much of opinion would clear a vessel of as many gun boats as can lay along side.

Now Sir, if you should think these matters can be of service to our country, by your orders, I will have a coat of mail made so as to shew it to any person you shall appoint, for him to make a report of both. As to the one sent general Knox, I wrote for it several times, and at length sent one of my sons to his office in Philadelphia, but could never get it back; several military men called at my house to examine it, but were disappointed,

neither did I ever receive any compensation; it was worth ten dollars; this puts me in recollection that I sent to the late secretary of the Navy, by his order, a piece of prepared leather, worth at least ten shillings, to put on the bottom of a vessel, as an experiment to prevent worms. No pay nor thanks, so that upon the whole, it may be more advantage to me and family, to put the little parts of my mechanical brains to sleep, than to puzzle them for the good of my country.

I am Sir, with due respect,
Your most humble serv't,
HENRY GUEST.

The honourable Secretary of War, at the City of Washington.

SIR,

The foregoing letter was addressed to your inspections, and the writer thereof expected you to be so attentive or complaisant as to notice to him your reception thereof, especially as it treated of matters that might be made a particular use to our country. Whether your inattention proceeded from want of ingenuity, carelessness, or pride, to notice a letter from a mechanick I know not, as I have not the pleasure of knowing your general character, though at the head of a department that requires great vigilence; and as a considerable time has elapsed since it came to your hands, and the writer near four score years, you will be pleased to excuse him laying that letter with the following remarks before the publick, as he thinks it contains matters that

should not be suppressed ; for if his memory serves him, a toast given at a publick dinner, soon after the receipt of that letter, was to this effect :—No more instruments of death for the human species—from which I judged that it was thought right to suppress such a described instrument. Whether the air of the city of Washington has a relaxing power on the nervous system I know not ;—the ladies of the town are, perhaps, the best judges. If this, Sir, was your toast, and if it should so happen that you are ever obliged to fight, be pleased to call on me or my heirs, you shall have a coat of mail to save your bacon. Now that it may reach the notice of military men out of the air of Washington, it is thought proper to give some little description of it. Its weight may be about 7 or 9 pounds ; it will last as long as wood and iron ; its powers have been tried on the bones of a remarkable large boned horse I lately lost, and in less than two seconds of a minute it shivered the bones of the fore and hind leg, and in one stroke it bent a short bar of iron one inch square. I am of opinion that it would be of service to an army, as no horse could penetrate ; one stroke on the head or leg would stop his farther advance, and in attack with musket and bayonet, one stroke across the barrel, if it did not break it, it would bend it so as to make it useless. If I am right so far I should think that our government should have some thousands always ready laid up with muskets that they are getting made. It is true that they cannot be of use only in close fighting,

But I trust if ever our country is attacked again by a foreign enemy it will rise to a man, and not stand at long shot, but make short work with them by the force of these instruments, and in the boarding of vessels they may be made useful to a point. As to the coat of mail, I will be answerable for the following description;—it covers the whole body below the hips, part of the neck, shoulder and arm to the elbow; it may weigh from six to eight pounds; it may last from one generation to the next with care; no sabre or sword of any description can penetrate it; it was tried by the hands of a strong man, with a heavy musket and keen bayonet, but it could not be pierced, and in some directions it will glance a ball.

Pardon me, Sir, when I remark it as my opinion, that had our brave and enterprising Commodore Preble, been furnished with ten setts to each boat of these instruments and coats of mail at 15 dollars a set, they undoubtedly would have taken all the gun boats belonging to the harbour of Tripoli, with little loss of our brave men, when the fire ship might have done the duty she was designed for and our brave men saved. This would have had such an effect on the tyrant of that country, as would have put it in the power of our Commodore to have released our countrymen now in chains, and made peace on his own terms; we have now all to do over again, at perhaps half a million of dollars expense, and what is far more to be regretted, the death of our gallant countrymen, without

one coat of mail, or one new formed instrument, to knock these pirates in the head by dozens. What, Sir, can be said in defence of your supineness? do you say these informations come from a mechanick, not known by any gentleman of your acquaintance, and consequently not to be regarded. Be pleased Mr. Secretary of war, to look around you, and you will find that nearly all the new inventions that have been brought forward lately for the honour and benefit of our country and mankind, have been by mechanicks. Again, Sir, I am fully of opinion, that had the above noted letter been addressed to his excellency, the president of the United States, he would have seen with a glance of one eye, that one part of it was calculated to save his much respected seamen, and the other to destroy the rascally pirates of the Mediterranean—and that he would have so far regarded the information as to have had those matters fully examined, by men in the military line, and reported where it was proper. This though out of his department, I think would have been done as the guardian of his country. Upon the whole, Mr. Secretary of war, you may give your pusillanimous toast as often as there is a publick dinner at the city of Washington or elsewhere, but these matters shall not be put in your power to smother.

I am Sir, with due respect, honouring the commission you bare and source from whence it came,

Your most humble serv't,

Secretary of War. HENRY GUEST.

NOTE.

The following note should be introduced to the bottom of page twenty one, of this pamphlet.

Before I close the subject of some part of the nature of timber, it may be proper to shew how and by what means the sap is raised from the root to the utmost branches. I remember to have read an English author on this subject, who would have his readers believe, that it was done by natural suction, and a late author in an annual register saith, that the sap begins to rise in the latter end of February, by the force of strong winds bending the trees to and fro. These writers are both in in a mistake and so are all the readers who put their faith in their simple reasonings. If those writers had ever fallen trees or even stood near the falling a thrifty tree, in the time when the sap was in full vigour, they might have observed, without a microscope, that the sap was forced up by the power of air contained in bubbles, one after another, as big as the head of a large pin. This is the true reason of the sap raising. The hand that writes this, in his younger years, was master of an axe, and many a large tree it has fallen, when the above observations were made.